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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,265	06/25/2003	Peter T. McCarthy	NATURES.024A	3385
20995	7590	01/11/2006	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP			SWIATEK, ROBERT P	
2040 MAIN STREET			ART UNIT	
FOURTEENTH FLOOR			PAPER NUMBER	
IRVINE, CA 92614			3643	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,265

Applicant(s)

MCCARTHY, PETER T.

Examiner

Robert P. Swiatek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4, 7, 8, 10-13, 15, 20-22, 25-38 and 41-48 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 9, 14, 16-19, 23, 24, 39 and 40 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10-17-03; 10-28-05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 4, 7, 8, 10-13, 15, 20, 21, 38, 41-48 are rejected under 35 U.S.C. 102(b) as being anticipated by Axelson (US 2,846,165). The Axelson patent discloses a method wherein auxiliary airfoils 13-16 are provided at the tips of the wings 11, 12 of an aircraft. As shown in Figure 1 of Axelson, wings 11, 12 are standard airfoils extending from a fuselage and capable of generating upward lift, while auxiliary airfoils 15, 16 depend downwardly from the high pressure surfaces of the wings with chords substantially parallel to the longitudinal axis of the aircraft. Since column 4, lines 8-11, of Axelson states the auxiliary airfoils “may be given a suitable aerodynamic shape and cross section configuration,” it is considered inherent that the asymmetric nature of the airfoil shapes therefore would induce inwardly-directed lifting forces oriented from the outer, high pressure surfaces of the airfoils toward their low pressure surfaces. The inwardly-directed lifting forces would be orthogonal to the lifting force formed by wings 11, 12 and generate a concurrent cross flow from the tip of each wing toward its root; additionally, the drag vortex resulting from interaction between each inwardly-directed cross flow and the slipstream would extend from the surface of each wing—and essentially within the boundary

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layer thereof—and rearwardly behind it. As to claims 21, 45, each of the airfoils 15, 16 of Axelson is pivotable relative to its associated wing about a transverse axis X-X, Y-Y.

Claims 22, 25-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Axelson. The airfoils 15, 16 of Axelson are each pivotable about a transverse axis X-X, Y-Y relative to an aircraft wing 11, 12, allowing them to assume inward and outward deflections with respect to the wing tips. The inward lifting-forces generated by the cambered airfoils 15, 16—such forces being horizontally oriented with respect to the wings—would not conflict with or reduce the lift produced by the wings 11, 12 of the aircraft. Moreover, the interaction of inwardly-directed air flow resulting from the low pressure on the inboard side of each airfoil 15, 16 with outwardly-directed air flow created by the airfoil shape of the wing perforce would reduce the quantity and condition of the outwardly-directed air flow.

Claims 5, 6, 9, 14, 16-19, 23, 24, 39, 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant should note that although the Heal patent (US 2,418,301) has not been applied in this rejection, the aircraft supporting surface 21 disclosed therein conceivably could “read” upon one or more of the instant claims if the Heal aircraft were operated upside down.

Applicant's arguments filed 28 October 2005 have been fully considered but they are not persuasive. Claims 4, 7, 8, 10-13, 15, 20-22, 25-38, 41-48 are not believed allowable for the reasons set forth above.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Summary: Claims 1-3 have been canceled; 4, 7, 8, 10-13, 15, 20-22, 25-38, 41-48 have been rejected; claims 5, 6, 9, 14, 16-19, 23, 24, 39, 40 have been objected to.

RPS: 571/272-6894
9 January 2006

Robert P. Swiatek

ROBERT P. SWIATEK
PRIMARY EXAMINER
ART UNIT ~~333~~ 3643